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=> d his

     (FILE 'HOME' ENTERED AT 16:22:36 ON 15 JUN 2006)

     FILE 'CAPLUS' ENTERED AT 16:32:39 ON 15 JUN 2006
L1             1 S US6579853/PN
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L2          1073 S E1

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L3             1 S L2

     FILE 'STNGUIDE' ENTERED AT 16:33:49 ON 15 JUN 2006

     FILE 'REGISTRY' ENTERED AT 16:34:02 ON 15 JUN 2006

     FILE 'CAPLUS' ENTERED AT 16:34:22 ON 15 JUN 2006
L4          1155 S L3 OR ARASAPONIN(W)E1 OR GINSENOSIDE(W)RB1 OR GYNOSAPONIN(W)C
L5             8 S L4(L)(TRAUMA? OR INJUR?(7A)(HEAD OR NERVOUS OR SPINAL OR CERE

     FILE 'USPATFULL, USPAT2' ENTERED AT 16:56:52 ON 15 JUN 2006
L6             3 S L5

     FILE 'MEDLINE' ENTERED AT 16:58:18 ON 15 JUN 2006
L7             3 S L5

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(BRAIN OR BRAINS)
L5 8 L4(L)(TRAUMA? OR INJUR?(7A)(HEAD OR NERVOUS OR SPINAL OR CEREBR? OR CEREBEL OR BRAIN))

=> d ibib abs 1-8

L5 ANSWER 1 OF 8 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2004:1089322 CAPLUS
DOCUMENT NUMBER: 142:212180
TITLE: Calcium-independent CaMKII activity is involved in ginsenoside Rb1-mediated neuronal recovery after hypoxic damage
AUTHOR(S): Park, Jin Kyu; Namgung, Uk; Lee, Chang Joong; Park, Jong Oh; Jin, Sung-Ha; Kwon, Oh-Bin; Ko, Sung Ryong; Kim, Sang Won; Kang, Eun Jung; Ko, Ji Hun; Lee, Sang Myung; Kim, Dong Hee; Won, Moo Ho
CORPORATE SOURCE: Department of Bio-institute, KT & G Central Research Institute, Daejeon, 305-805, S. Korea
SOURCE: Life Sciences (2005), 76(9), 1013-1025
CODEN: LIFSAK; ISSN: 0024-3205
PUBLISHER: Elsevier B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Recent studies have indicated that Ginsenoside Rb1, one of the major components of ginseng root, may play an important role in protecting cells from damage. Here, we investigated the neuroprotective activity of Rb1 after hypoxic injury in young rats. About 50% animals were dead by exposing hypoxic condition three times in three consecutive days. Then, the pretreatment with Rb1 prior to hypoxic stimulation reduced animal death to 12%, and also significantly reduced the recovery time from hypoxia-related, compromised symptoms in survived animals. Rb1 also significantly reduced levels of lactate dehydrogenase (LDH) release from primary hippocampal neurons which were maintained at low oxygen concentration, indicating increased neuronal survival by Rb1. Ca2+/calmodulin-dependent kinase II (CaMKII) activity in the hippocampal tissues of hypoxia-induced rats was decreased to about 50% of the control animal. Then Rb1-treatment prior to hypoxic stimulation significantly elevated Ca2+-independent kinase II activity when measured 48 h after hypoxic stimulation. Thus, the present data suggest that calcium independent CaMKII activity may be involved in the process of ginsenoside Rb1-mediated recovery of neuronal cells after hypoxic damage.
REFERENCE COUNT: 33 THERE ARE 33 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 2 OF 8 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2004:1075600 CAPLUS
DOCUMENT NUMBER: 142:148297
TITLE: Protective effect of fermented red ginseng on a transient focal ischemic rats
AUTHOR(S): Bae, Eun-Ah; Hyun, Yang-Jin; Choo, Min-Kyung; Oh, Jin Kyung; Ryu, Jong Hoon; Kim, Dong-Hyun
CORPORATE SOURCE: College of Pharmacy and Kyung Hee University, Seoul, 130-701, S. Korea
SOURCE: Archives of Pharmacal Research (2004), 27(11), 1136-1140
CODEN: APHRDQ; ISSN: 0253-6269
PUBLISHER: Pharmaceutical Society of Korea
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Red ginseng and fermented red ginseng were prepared, and their composition of ginsenosides and antiischemic effect were investigated. When ginseng was steamed at 98-100° for 4 h and dried for 5 h at 60°, and extracted with alc., its main components were ginsenoside Rg3 > **ginsenoside Rb1** > ginsenoside Rb2. When the ginseng was suspended in water and fermented for 5 days by previously cultured Bifidobacterium H-1 and freeze-dried (fermented red ginseng), its main components were compound K > ginsenoside Rg3 ≥ ginsenoside Rh2. Orally administered red ginseng extract did not protect ischemia-reperfusion

brain injury. However, fermented red ginseng significantly protected ischemica-reperfusion **brain injury**. These results suggest that ginsenoside Rh2 and compound K, which was found to be at a higher content in fermented red ginseng than red ginseng, may improve ischemic **brain injury**.
REFERENCE COUNT: 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 3 OF 8 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2004:262702 CAPLUS
DOCUMENT NUMBER: 140:332356
TITLE: Ginsenoside Rh2 reduces ischemic brain injury in rats
AUTHOR(S): Park, Eun-Kyung; Choo, Min-Kyung; Oh, Jin Kyung; Ryu, Jong Hoon; Kim, Dong-Hyun
CORPORATE SOURCE: College of Pharmacy, Kyung Hee University, Seoul, 130-701, S. Korea
SOURCE: Biological & Pharmaceutical Bulletin (2004), 27(3), 433-436
CODEN: BPBLEO; ISSN: 0918-6158
PUBLISHER: Pharmaceutical Society of Japan
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Ginseng was incubated under mildly acidic conditions and its inhibitory effect on a rat ischemia-reperfusion model was investigated. When ginseng was treated with 0.1% hydrochloric acid at 60°, its protopanaxadiol saponins were transformed to diastereomeric ginsenoside Rg3 and Δ20-ginsenoside Rg3. When the transformed ginseng extract, of which the main component was ginsenosides Rg3, was treated with human intestinal microflora, the main metabolite was ginsenoside Rh2. Orally administered acid-treated ginseng (AG) extract and ginsenoside Rh2 potently protect ischemia-reperfusion brain injury. The ginsenoside Rh2 also inhibited prostaglandin-E2 synthesis in lipopolysaccharide-stimulated RAW264.7 cells, but showed no in vitro antioxidant activity. These results suggest that AG and ginsenoside Rh2 can improve ischemic brain injury.
REFERENCE COUNT: 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 4 OF 8 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2002:672254 CAPLUS
DOCUMENT NUMBER: 137:210985
TITLE: Ginsenoside derivatives as apoptosis inhibitors and regeneration promoters
INVENTOR(S): Sakanaka, Masahiro; Tanaka, Junya; Nakata, Kimihiko; Uno, Hidemitsu; Kuramoto, Makoto
PATENT ASSIGNEE(S): Japan Science and Technology Corporation, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 61 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002249498	A2	20020906	JP 2001-44818	20010221
WO 2002072599	A1	20020919	WO 2002-JP369	20020121

W: CN, KR, US
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR

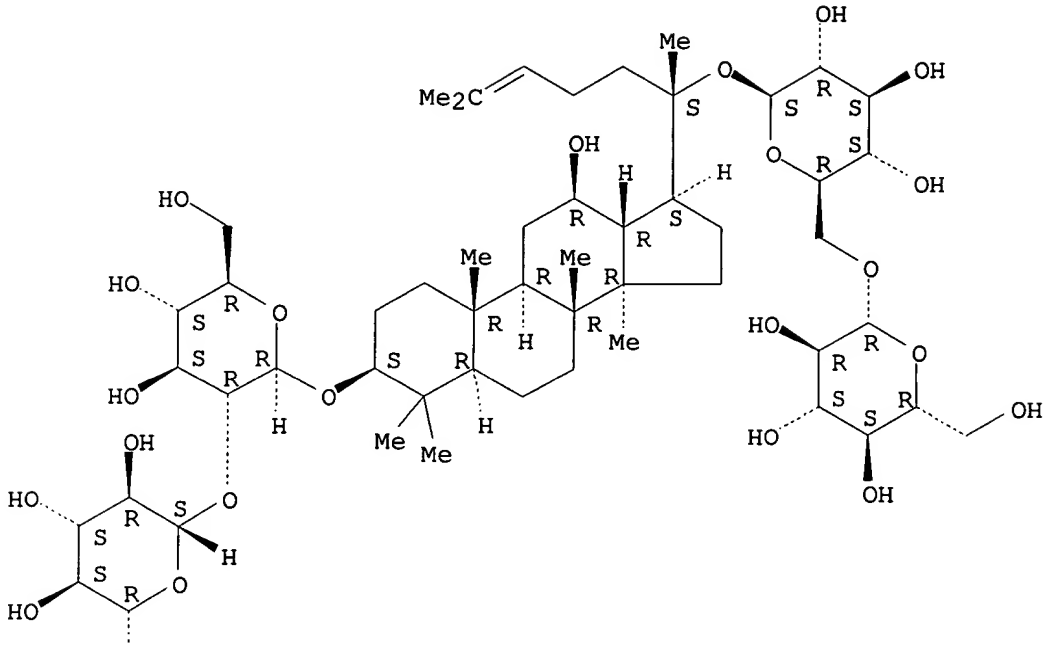
PRIORITY APPLN. INFO.: JP 2001-44818 A 20010221
GI

=> d l3 rn str cn

L3 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2006 ACS on STN
RN **41753-43-9** REGISTRY

Absolute stereochemistry.

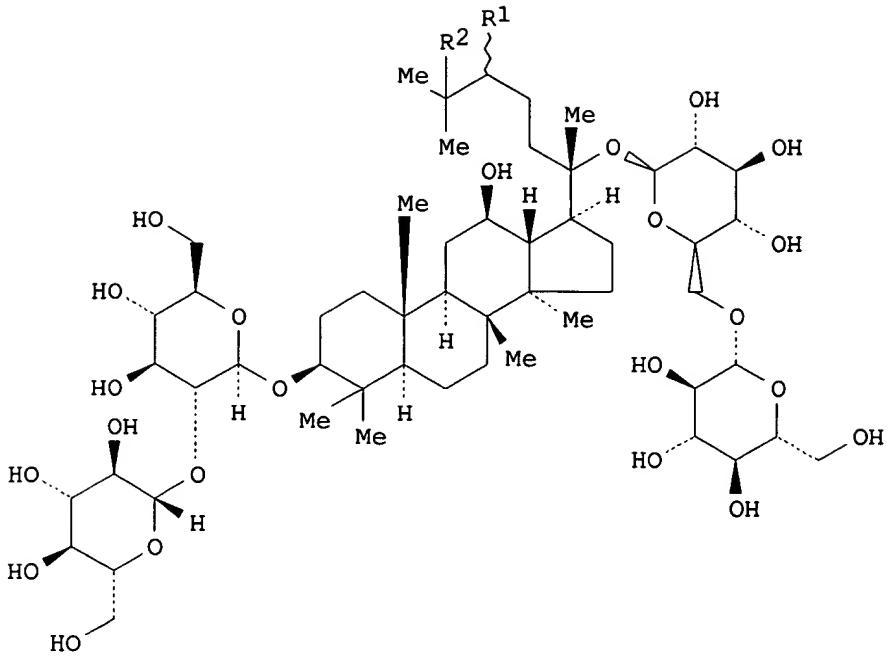
PAGE 1-A



PAGE 2-A

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

CN β-D-Glucopyranoside, (3β,12β)-20-[(6-O-β-D-glucopyranosyl-β-D-glucopyranosyl)oxy]-12-hydroxydammar-24-en-3-yl 2-O-β-D-glucopyranosyl- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Dammarane, β-D-glucopyranoside deriv.
OTHER NAMES:
CN Arasaponin E1
CN Ginsenoside Rb1
CN Gynosaponin C
CN Gypenoside III
CN Notoginsenoside Rb1
CN NSC 310103
CN Panaxoside Rb1
CN Sanchinoside E1
CN Sanchinoside Rb1



I

AB Ginsenoside derivs. (I; R1, R2 = OH, O (forming oxirane ring with adjacent C)), including dihydroxy- and epoxy-**ginsenoside Rb1**, in topical prepns. or injections are claimed as apoptosis inhibitors (for brain, nerve, and transplanted organ or tissue cells), regeneration promoters for wound healing of skin, tissue, and mucosa **injuries**, and neuroprotectants for **brain** ischemia and infarction, stroke, **trauma**, and **spinal injury**. In addition, I are also useful for plant and animal growth regulation.

L5 ANSWER 5 OF 8 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2002:89640 CAPLUS
DOCUMENT NUMBER: 137:221851
TITLE: Neuroprotective effects of ginseng total saponin and ginsenosides Rb1 and Rg1 on spinal cord neurons in vitro
AUTHOR(S): Liao, Baisong; Newmark, Harold; Zhou, Renping
CORPORATE SOURCE: Laboratory for Cancer Research, Department of Chemical Biology, College of Pharmacy, Rutgers University, Piscataway, NJ, 08854, USA
SOURCE: Experimental Neurology (2002), 173(2), 224-234
CODEN: EXNEAC; ISSN: 0014-4886
PUBLISHER: Academic Press
DOCUMENT TYPE: Journal
LANGUAGE: English

AB **Spinal** cord **injury** is a major cause of disability and results in many serious phys., psychol., and social difficulties. Numerous studies have shown that **traumatic spinal** cord **injuries** (SCI) lead to neuronal loss and axonal degeneration in and around the injury site that cause partial disability or complete paralysis. An important strategy in the treatment of SCI is to promote neuron survival and axon outgrowth, making possible the recovery of neural connections. Using an in vitro survival assay, the authors have identified **ginsenosides Rb1** and Rg1, extracted from ginseng root (Panax ginseng C. A. Meyer), as efficient neuroprotective agents for spinal cord neurons. These compds. protect spinal neurons from excitotoxicity induced by glutamate and kainic acid, as well as oxidative stress induced by H2O2. The neuroprotective effects are dose-dependent. The optimal doses are 20-40 μM for **ginsenosides Rb1** and Rg1. The effects are specific for Rb1 and Rg1, since a 3rd ginsenoside, Re, did not exhibit any activity. Ginseng was used for thousands of years in the treatment of neurol. disorders and other diseases in Asia. **Ginsenosides Rb1** and Rg1 represent

potentially effective therapeutic agents for **spinal** cord **injuries**. (c) 2002 Academic Press.
REFERENCE COUNT: 70 THERE ARE 70 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 6 OF 8 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2000:592562 CAPLUS
DOCUMENT NUMBER: 133:168413
TITLE: Cerebrovascular regeneration/reconstruction promoters and nerve tissue secondary degeneration inhibitors comprising ginsenoside RB1
INVENTOR(S): Sakanaka, Masahiro; Tanaka, Junya; Sato, Kohji
PATENT ASSIGNEE(S): Japan Science and Technology Corporation, Japan
SOURCE: PCT Int. Appl., 59 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000048608	A1	20000824	WO 1999-JP6804	19991203
W: CN, KR, US				
RW: CH, DE, FR, GB, IT				
JP 2000302798	A2	20001031	JP 1999-340850	19991130
EP 1170012	A1	20020109	EP 1999-973693	19991203
R: CH, DE, FR, GB, IT, LI				
EP 1669078	A1	20060614	EP 2006-4509	19991203
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL				

PRIORITY APPLN. INFO.:
JP 1999-41517 A 19990219
JP 1999-340850 A 19991130
EP 1999-973693 A3 19991203
WO 1999-JP6804 W 19991203

AB Efficacious prepns. for i.v. administration containing ginsenoside Rb1 or its salt which are useful as vascular regeneration/reconstruction promoters and nerve tissue secondary degeneration inhibitors. These prepns. are useful particularly in regenerating and reconstructing the cerebrovascular network after cerebral stroke and inhibiting nerve tissue secondary degeneration. The effect of i.v. administered ginsenoside Rb1 was examined using stroke-prone spontaneously hypertensive (SH-SP) rats with occlusion of the middle cerebral artery (MCA).
REFERENCE COUNT: 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 7 OF 8 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1996:75269 CAPLUS
DOCUMENT NUMBER: 124:165099
TITLE: Influences of ginsenosides Rb1 and Rg1 on reversible focal brain ischemia in rats
AUTHOR(S): Zhang, Ying-Ge; Liu, Tian-Pei
CORPORATE SOURCE: Dep. Pharmacol., Nanjing Med. Univ., Nanjing, 210029, Peop. Rep. China
SOURCE: Zhongguo Yaoli Xuebao (1996), 17(1), 44-8
CODEN: CYLPDN; ISSN: 0253-9756
PUBLISHER: Kexue
DOCUMENT TYPE: Journal
LANGUAGE: English

AB We studied the effect of **ginsenosides Rb1** and Rg1 (active components of the total saponins of Panax ginseng) in **brain** ischemia-reperfusion **injury**. Rat focal cerebral ischemia was induced by reversible middle cerebral artery occlusion (MCAO) without craniectomy. The influences of **ginsenoside Rb1** and Rg1 on infarct size (IS), neurol. deficit (ND) and the contents of calcium and potassium in the infarct were observed In a 2-h ischemia, Rb1 10-40 mg·kg-1 i.v. 30 min before MCAO decreased IS by 20% - 49% and ND score from 5.1 to 4.1-2.3, and inhibited Ca accumulation and K loss by

22%-50% and 18-37%, resp.; Rb1 10-40 mg·kg-1 i.v. immediately after MCA was recanalized decreased IS by 12%-35% and ND score from 5.2 to 4.3-3.3, and inhibited Ca accumulation and K loss by 10%-40% and 17% -30%, resp. In permanent ischemia, Rb1 40 mg·kg-1 i.v. reduced IS, ND, Ca accumulation and K loss. However, Rg1 30 mg·kg-1 i.v. did not show effect on both permanent and 2-h MCAO. Rb1 protected **brain** from ischemic and reperfusion **injuries**.

L5 ANSWER 8 OF 8 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1990:172041 CAPLUS
DOCUMENT NUMBER: 112:172041
TITLE: Inhibition of lipid peroxidation and protection against cerebral ischemia-reperfusion injuries in rats by ginsenosides.
AUTHOR(S): Chu, Guoxiang; Chen, Xiu
CORPORATE SOURCE: Dep. Pharmacol., Hunan Med. Univ., Changsha, 410078, Peop. Rep. China
SOURCE: Zhongguo Yaoli Xuebao (1990), 11(2), 119-23
CODEN: CYLPDN; ISSN: 0253-9756
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Ginsenosides Rb and Ro provided protection against cerebral ischemia-reperfusion injuries in rats. The beneficial effects of ginsenosides were attributed to facilitation of prostacyclin formation and release, decrease in thromboxane A2 formation, and inhibition of free radical-mediated lipid peroxidn.